Building Connections with New Teaching and Learning Approaches

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Tena Koutou

From all of us at Wintec!

Jai, Sarla &Thilanga

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Karakia

He tìmatanga: Whakataka te hau

Whakataka te hau ki te uru	*Cease the winds from the west*
Whakataka te hau ki te tonga	*Cease the winds from the south,*
Kia mākinakina ki uta	*Let the breeze blow over the land*
Kia mātaratara ki tai	*Let the red tipped dawn come*
E hī ake ana te ataakura	*With a sharpened air,*
He tio, he huka, he hauhunga	*A touch of frost, a promise of a*
Tīhei Mauri Ora	*glorious day.*

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Tell me and I forget. Teach me and I remember. Involve me and I learn.'

–Benjamin Franklin

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Teaching Pedagogies

Teaching Pedagogies

Flipped Classroom

Blended learning that reverses the traditional learning environment by delivering material/ content, often online, outside of the classroom

Inquiry Based Learning

An approach that emphasizes and signifies the learner's role in the learning process

Active Learning

A foundation of interactive, creative, engaging and instructional learning strategy for Learners.

Differentiated Learning

Learners that come from different backgrounds and educational capabilities, we can customize their pathways for learning to achieve one common goal

Reflective Teaching

The most essential ingredient for sustainable learning in education is reflecting yourself by attaining feedback from the learners

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Student Centered Learning

Functional and effective approach to all learnings globally

Efficient transition of teacher centered to learner centered learnings

Modernised Learning Style

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Methodology

Applying the Teaching Pedagogies in Courses

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Flipped Learning

Teaching Practice Assignment

10% - Overall Grade

Learners work in pairs or groups depending on class size,

	Criteria	Mark
Lecture	Materials prepared in advance	
	Lesson content planned, including all the necessary components – learning outcomes, content, teaching methods, resources, timing and evaluation	
	Lesson shows logical sequencing	25%
	Terminology appropriate to subject and understood by students	
	Pace of delivery is appropriate	
	Clear explanation of skill/ knowledge to be taught	
Example	The problem clearly presented, i.e. easy to understand	
	Resources well designed, aid learning	25%
	The style and manner of the presenter(s) engaged student with the topic	
	Tutor's instructions clear	
	Sensitivity to students' needs is demonstrated	
	A positive relationship with students is established	50%
	Interaction with students is sought (Are they free to ask questions? Make suggestions?	
	Good questioning and listening skills are used	
		100%

Learners' delivering their teaching practice

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Inquiry Based Learning

NEW ZEALAND DIPLOMA IN ENGINEERING
DE4101 Engineering Fundamentals

Inquiry questions:

Choose one of the following inquiry questions. Once selected let your tutor know your group of 3 or 4 and the question.

- Prove that gravity is 9.81 m/s^2
- Show the coefficient of friction between two surfaces is the same as a standard value (i.e. steel and steel is between 0.5 and 0.8)
- Prove the c value for water is 4181 J/kg/K (or another c value proof)
- Prove the L value for ice is 334000 J/kg (or another L value proof)
- Show the centroid formula gives the same value as a physical method of measurement
- Prove the conservation of Momentum theorem
- Prove the conservation of energy theorem
- Show that steel has an E of 200,000,000 Pa
- Prove that the reaction forces of a simply supported beam can be found using moments (non-concurrent force solution)
- Prove the density of water is 1000 kg/m^3
- Prove the electrical relationship V=IR

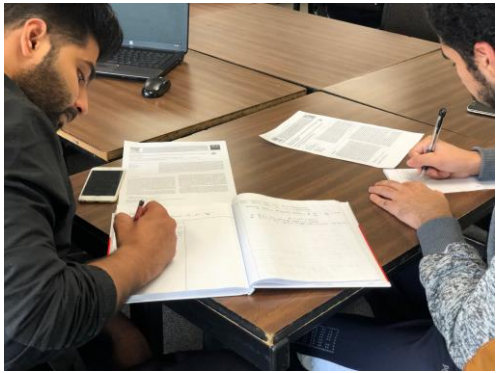
Create the experiment

As a team, investigate ways you could create an experiment to solve or prove your question.

- You must write down your method. Take this to one of the tutors who will then help you out with final thoughts, and then to collect materials.
- What material do you need (talk to the tutors to see what is available)?
- What data are you going to collect?
- How many times do you need to carry out the experiment?
- What sources of error may exist that you need to be aware of when carrying out the experiment?

Carry out the experiment

- As a team carry out the experiment.
- Write down all data
- Write down all observations (even if you think you don't need it – you may be surprised)
- Write down things that happened you weren't expecting



Double – Entry Journal Activity

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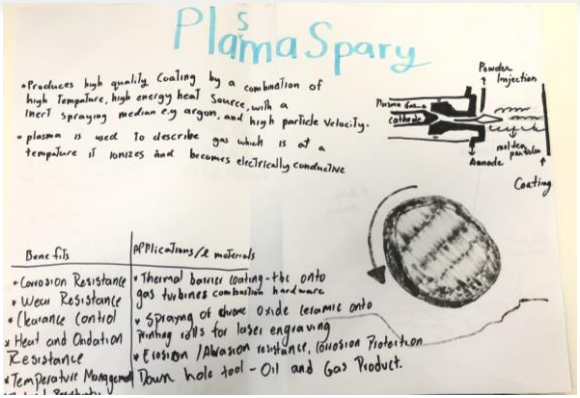
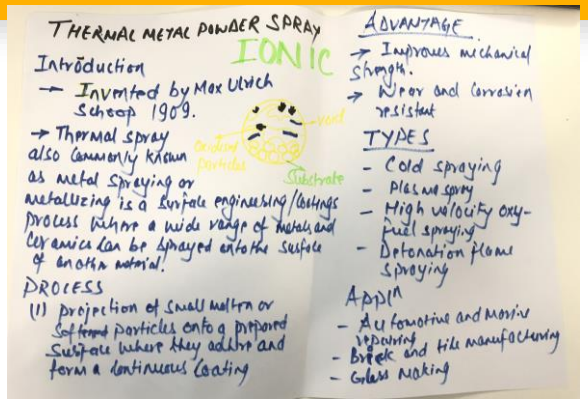
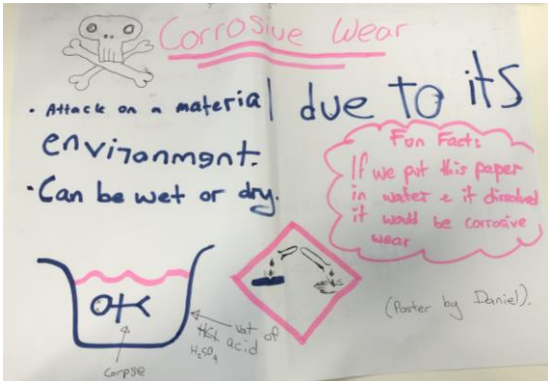
Created Laboratory Assignments

Active Learning





- ✓ Learners are formed in groups (affinity grouping)
- ✓ Each group conducts research and develops information on the topic allocated.
- ✓ From all the collected information, each group designs an **Interactive Poster** to showcase their information.



Differentiated Learning

News forum

Group Assignment Forum

- ✓ Created News Forums for all the learners' queries on Moodle (online teaching portal)
- ✓ Conduct weekly informal Café 1-hour drop-ins for learners to do one-on-one sessions – Learners facilitate these sessions with all their queries and teacher would provide solutions after

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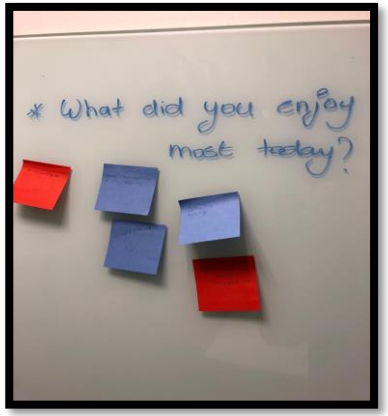
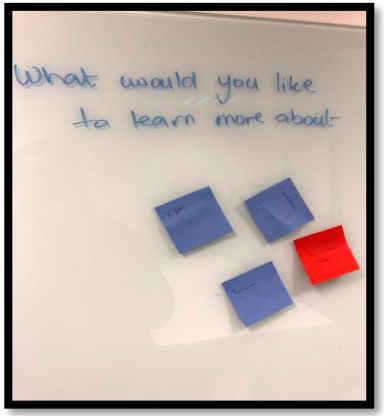
Reflective Teaching

Ticket of Out Class





All the learners to write the comments/feedback on the post it notes given and put it on the white board – Shown in the images

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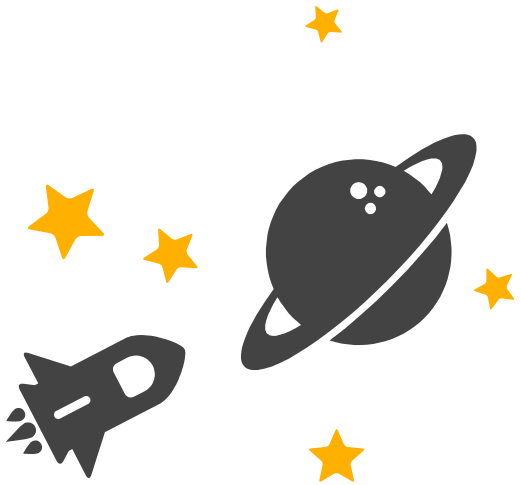
Building Connections



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Come on Guys, Let’s Engage!

-Make small groups
-Discuss about strategies that can be used to
-build connections
-5 Mins

Diversity

Being from different culture and learning environment all learners are having different level of understanding.

- Make pair of learners, one with good knowledge and one with moderate
- Working in multicultural environment is making presentations in pair to make learners more confident and remove shyness from their personality.

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CONT.

- Cultural awareness and respect focus on group tasks, the preparation of whanaungatanga in classroom are good consideration to improve student's engagement and motivation.
- Tuakana/ Teina.
- Different age groups, Different culture and Different level of maturity
- Working together in groups and doing projects - example of kotahitanga- the ethic of unity.

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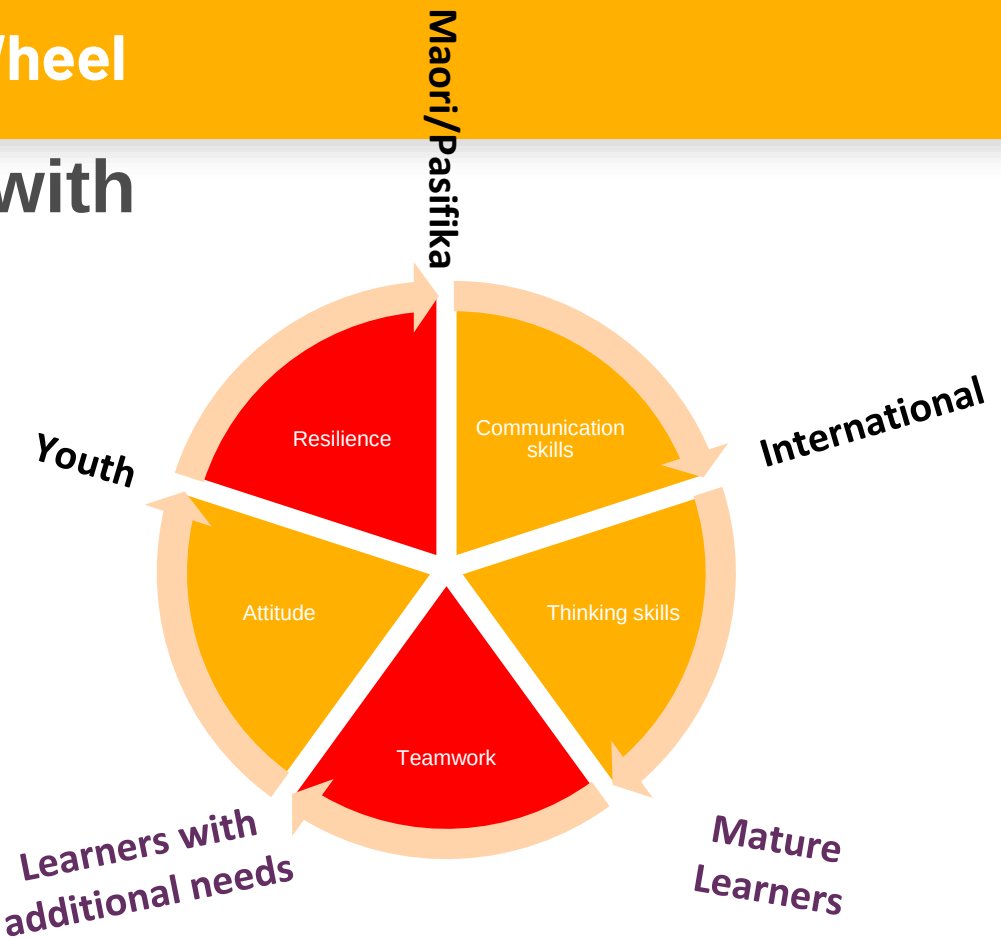
Education Wheel

Working with Diversity



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Resilience and Thinking skills

- **Students participating in Engineering/Open Day held in May 2018**
- They always happy on the end once they get success in their research, this shows they are enjoying and improving their skills by trying things themselves.
- Quizzes, tests or kahoot, flipped classroom

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Engagement

- Practicing Te-Tiriti strategies and Manaakitanga - ethic of caring creating healthy and comfortable learning and working environment in regular classes.
- We found good impact on learners to make strong bonds between learners and better understanding.
- We always try to start classes with Maori greetings like Kia Ora. We have many Māori and Pacific students in our classes.

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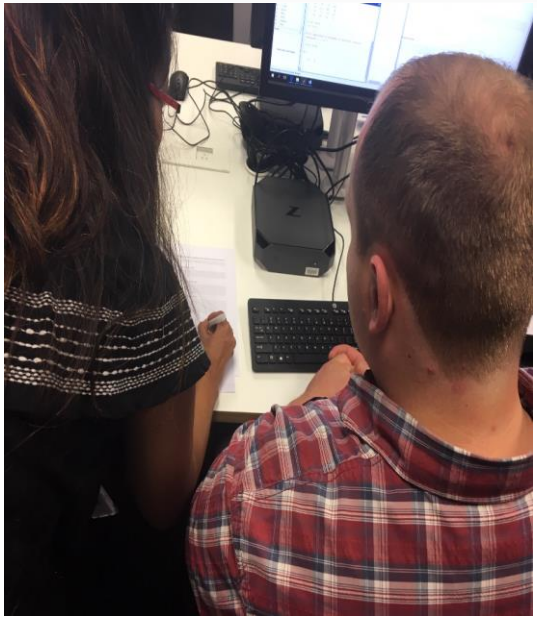
Learner Centered Classroom....Mahi Tahi



Classroom is the best place to prepare learners to work in team.

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Ticket out of Class

- **What did you enjoy the most today in this session?**
- **What suggestions for improvements would you like to make?**
- **What would you like to learn more about in upcoming ITP Forums?**

- Use the post it and provide feedback for each question.

THANKS!

Any questions?

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